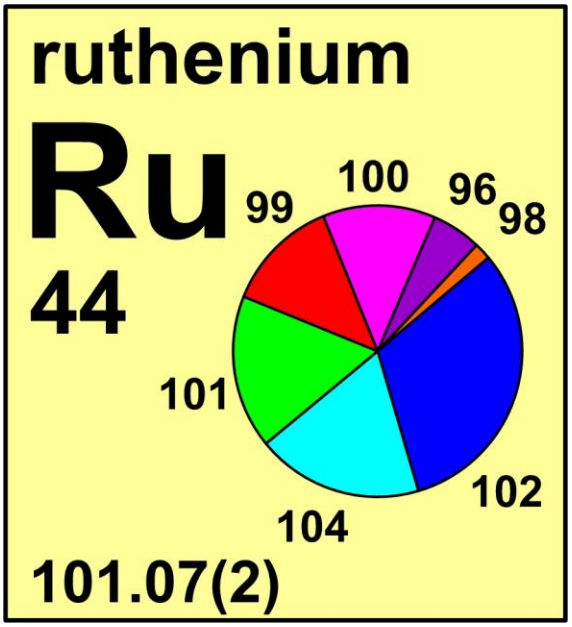
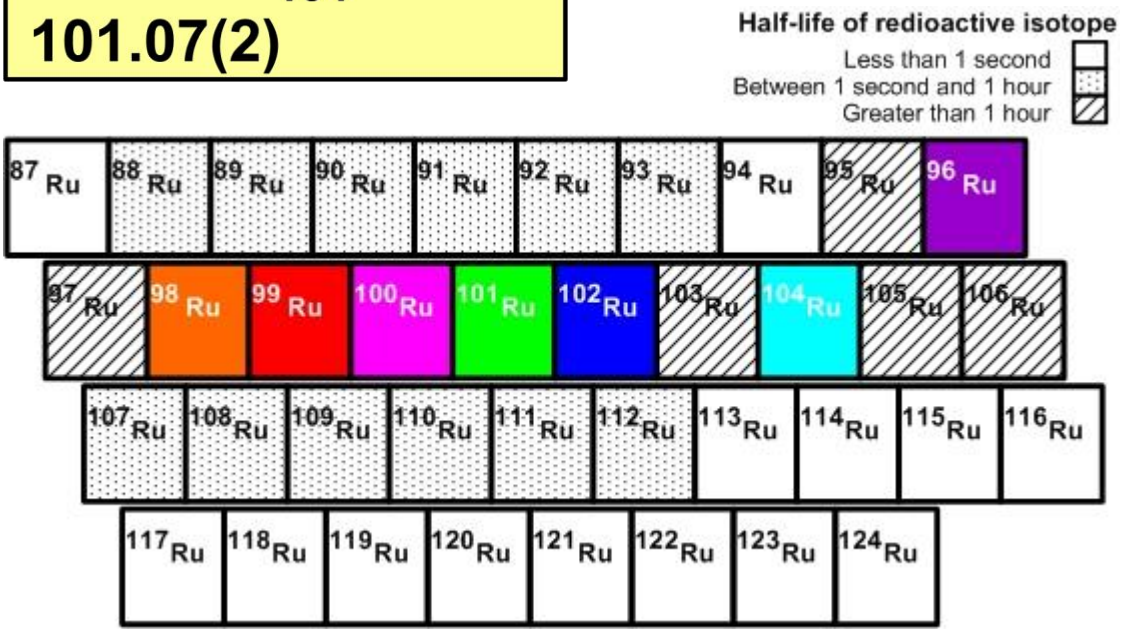
ruthenium



Stable isotope	Atomic mass*	Mole fraction
^{96}Ru	95.907 598	0.0554
^{98}Ru	97.905 287	0.0187
^{99}Ru	98.905 9393	0.1276
^{100}Ru	99.904 2195	0.1260
^{101}Ru	100.905 5821	0.1706
^{102}Ru	101.904 3493	0.3155
^{104}Ru	103.905 433	0.1862

* Atomic mass given in unified atomic mass units, u.



Important applications of stable and/or radioactive isotopes

Isotopes in physics

1) ^{100}Ruthenium is the product of a rare (and hence very long-lived) nuclear decay process known as double beta decay.
2) The ^{100}Ru nucleus is formed by the decay of ^{100}Mo. A careful measurement of the half-life for this decay, which is on the order of 10^{19} years, can be used to place an upper limit on the mass of the electron neutrino, a neutral and weakly interacting subatomic particle first postulated by Wolfgang Pauli in 1930.